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PREPARATIONS FOR THE UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT ON THE BASIS OF GENERAL ASSEMBLY RESOLUTION 44/228 AND TAKING INTO ACCOUNT OTHER RELEVANT GENERAL ASSEMBLY RESOLUTIONS:

# ENVIRONMENTALLY SOUND MANAGEMENT OF HAZARDOUS WASTE: OPTIONS FOR AGENDA 21 (Annex I)

## OPTIONS FOR AGENDA 21

Report of the Secretary-General of the Conference

### INTRODUCTION

The text in this document represents the final text as adopted by Working Group II after the informal consultations on agenda item 4 (a) (ref. document A/CONF.151/PC/WG.II/L.19) during the Third Session of the Preparatory Committee for the United Nations Conference on Environment and Development.

Furthermore the Secretary-General of the Conference was also requested by the Preparatory Committee, according to resolution 3/23, to submit to it, at its fourth session, document A/CONF.151/PC/WG.II/L.19, as revised during the informal consultation at the third session.

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ANNEX I

[ ENVIRONMENTALLY SOUND MANAGEMENT OF HAZARDOUS WASTE:
OPTIONS FOR AGENDA 21

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OVERALL OBJECTIVE

1. Within the framework of integrated life cycle management prevent to the extent possible and minimize the generation of hazardous wastes, as well as treat the wastes in a way that they do not cause harm to the environment.

OVERALL TARGETS

(a) Prevention or minimization of the generation of hazardous wastes, elimination or reduction of the transboundary movements of hazardous wastes to a minimum consistent with the environmentally sound and efficient management of those wastes, and self-sufficiency in waste disposal in the country of origin to the extent environmentally sound and efficient.

(b) Ratification of the Basel Convention and the expeditious elaboration of related protocols, [especially] the Protocol on liability and compensation, mechanisms and guidelines to facilitate the implementation of the Convention.

(c) Ratification and full implementation by the countries concerned of the Bamako Convention and the expeditious elaboration of a protocol on liability and compensation.

(d) [Full respect of the aims of the Bamako Convention by all countries.]

PROPOSED PROGRAMME AREAS

2. The following major programmes are proposed as options:

(a) Promote waste prevention and minimization through "cleaner production" methods avoiding the use of hazardous substances where substitutes are available, through resource recovery, recycling, reclamation, direct reuse or alternative uses of wastes.

(b) Enhance knowledge and information on economics of prevention and management of hazardous wastes.

(c) Increase knowledge about health and environmental impacts of hazardous wastes.

(d) Promote and strengthen institutional capacities in prevention, minimization and management of hazardous wastes.

(e) Promote and strengthen international cooperation in management of transboundary movements of hazardous wastes, including control and monitoring, consistent with international and regional legal instruments.

A. PROMOTE WASTE PREVENTION AND MINIMIZATION THROUGH "CLEANER PRODUCTION" METHODS AVOIDING THE USE OF HAZARDOUS SUBSTANCES WHERE SUBSTITUTES ARE AVAILABLE THROUGH RESOURCE RECOVERY, RECYCLING, RECLAMATION, DIRECT REUSE OR ALTERNATIVE USES OF WASTES

Basis for action

3. Human health and environmental quality are being continually degraded by the increasing amount of waste being produced. One of the first priorities in waste management therefore is minimization as part of a broader approach, including pollution prevention and cleaner production strategies, industrial processes and consumer patterns.

4. Among the most important factors in these strategies is the recovery of wastes into useful material. Technology application, modification and development of new low waste technologies is therefore currently a central focus of waste minimization.

Objectives

5. The objectives of this programme are to:

(a) reduce to the extent feasible the generation of hazardous wastes; and

(b) where practicable and environmentally sound utilize residues emanating from the production process optimizing use of raw materials.

6. To achieve the objectives, countries which can afford to adopt the requisite technologies without detriment to their development could establish policies including:

(a) Integration of cleaner production approach and waste minimization in all planning, and adoption of specific targets by a target year.

(b) To promote the use of regulatory and market mechanisms.

(c) Establish an intermediate target for the stabilization of the quantity of hazardous waste generated.

(d) Establish longer term targets for reducing the amount of hazardous waste produced per unit of manufacture.

(e) [Establish targets for countries producing banned or severely restricted chemicals (which are potentially hazardous wastes) to phase out such products and intensify R & D for alternatives.]

(f) To achieve, on a substance by substance basis, a qualitative improvement of waste streams, mainly through activities aimed to reduce hazardous substances in waste streams.

Activities

7. Promote information collection and dissemination

(a) Governments, 1/ assisted by international organizations, could establish mechanisms for assessing the value of existing information systems.

(b) Governments could establish nationwide and regional information collection and dissemination clearinghouses and networks which are easy to access and use for Government institutions and industry.

(c) International organizations, especially through the UNEP Cleaner Production Programme and the ICPIC system, could extend and strengthen existing systems for collection of cleaner production information.

(d) Promote the use and dissemination by all United Nations agencies of information collected through the Cleaner Production network.

(e) [Strengthen international cooperation in monitoring the transfer to other countries of industries generating toxic and hazardous wastes.]

(f) Cooperate in monitoring the effects of the management of hazardous wastes.

8. Technology development and research

(a) Governments, according to their possibilities and with the help of multilateral cooperation, academia and industry could significantly increase financial support for "cleaner technology R & D programmes", including the use of biotechnologies.

(b) Industry, with assistance from National Governments and international organizations, could promote research into the phase-out of hazardous processes and the reduction of raw materials and energy consumption.

(c) Industry could develop schemes to integrate the cleaner production approach into the design of products and their management practices.

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1/ [Throughout this document "Governments" also refers to the European Community acting in the sphere of its competence.]

9. Development of management tools and practices

(a) Governments could modify existing standards or specifications for purchases to encourage energy and raw materials savings and to avoid discrimination against recycled materials.

(b) Governments, according to their possibilities and with the help of multilateral cooperation, could provide economic or regulatory incentives to stimulate industrial innovation towards cleaner production methods, to encourage industry to invest in recycling technologies so as to ensure equal standards of environmental management to apply to recyclable wastes as well as to other types of wastes, and to encourage waste minimization investments.

(c) [Developed country Governments should provide a range of incentives to encourage industry to transfer technologies and know-how to developing countries on preferential and non-commercial terms. Industry could develop guidelines and codes of conducts leading to cleaner production through sectoral trade industry associations.]

(d) Governments, according to their possibilities and with the help of multilateral cooperation, should encourage, as far as possible, industry to treat and dispose of wastes at source, where waste generation is unavoidable.

(e) Governments according to their possibilities and with the help of multilateral cooperation, should encourage as far as possible combined treatment/disposal facilities for small and medium size industries.

(f) Governments should promote identification and clean-up of sites of hazardous wastes; in collaboration with industry and international organizations technologies, expertise and financing should be available for this purpose, as far as possible with the application of the polluter pays principle.

(g) Governments should encourage technology assessments e.g. through the use of technology assessment centres.

(h) [Governments according to their possibilities and with the help of multilateral cooperation should encourage industry to dispose of any such banned or severely restricted chemicals that are still in stock [or in use]/[but not in use], as soon as possible, in an environmentally sound manner.]

10. Promotion of education, training and public awareness

(a) Governments could increase support for industrial training programmes, incorporating waste prevention and minimization techniques and launching demonstration projects at the local level to develop "success stories" in cleaner production.

(b) Industry could integrate cleaner production principles and case examples into training programmes and establish demonstration projects/networks by sector/country.

(c) All sectors of society could develop cleaner production awareness campaigns and promote dialogue and partnership with industry and other actors.

11. Strengthening of institutional capacities including policies and planning

(a) Governments in developing countries in cooperation with industry and with the cooperation of appropriate international organizations, should develop inventories of hazardous waste production, in order to identify their needs of technology transfer and implementation for sound management of wastes and its disposal.

(b) Governments could include into national planning and legislation an integrated approach to environmental protection, driven by prevention and source reduction criteria, based on the polluter pays principle, [and adopt waste reduction targets].

(c) Governments could work with industry on sector-by-sector waste minimization campaigns, including quantified targets for raw material and energy use, as well as the reduction of wastes and other emissions.

(d) Strengthen national environmental impact assessment procedures to take into account the concept of "cradle to grave" approach for the management of hazardous wastes, to identify options for minimizing the generation of hazardous wastes, through safer handling, storage, disposal and destruction.

(e) Governments in collaboration with industry and appropriate international organizations could develop procedures for the monitoring of the application of the "cradle to grave" approach, including environmental audits.

(f) [Bilateral and multilateral development assistance agencies could substantially increase funding for cleaner technology transfer to developing countries and economies in transition, including small and medium size enterprises.]

[The implementation by developing countries of specific programmes and actions envisaged under Agenda 21, will be subject to the provision of adequate new and additional financial resources and of technology on concessional, preferential and non-commercial terms.

Proposals for means of implementation will include the following heading:

- Financing and cost evaluation

- Scientific and technological means

- Human resources development

- Building capacity of developing countries for preventive and corrective action in the field of environmental protection and promotion of development]

B. ENHANCE KNOWLEDGE AND INFORMATION ON ECONOMICS OF PREVENTION AND MANAGEMENT OF HAZARDOUS WASTE

Basis for action

12. Due to the increasing amounts of hazardous wastes generated every year, there are increasing direct and indirect costs to the society and to the individual citizens in connection with its generation, handling and disposal. To improve knowledge of the economics, including impact on employment and environmental benefits of hazardous waste management, it is therefore crucial that necessary capital investment be made available in development programmes.

Objectives

13. Facilitate the establishment of cost effective policies and approaches to hazardous waste prevention and management taking into consideration the state of development of each country.

Activities

14. Develop and implement a programme aiming at increasing knowledge and information on the economics of waste prevention and management.

15. A relevant and competent international organization could take the lead, in cooperation with other organizations, in inter alia:

(a) Developing guidelines for estimating the costs and benefits for various approaches to the adoption of cleaner production and waste minimization and environmentally sound management of wastes.

(b) Undertaking a comprehensive survey of and disseminate information on, experiences at national level in adopting economic regulatory schemes and incentive mechanisms for waste management and for the use of clean technologies, which prevent wastes from being generated.

[The implementation by developing countries of specific programmes and actions envisaged under Agenda 21 will be subject to the provision of adequate new and additional financial resources and of technology on concessional, preferential and non-commercial terms.

Proposals for means of implementation will include the following heading:

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C. INCREASE KNOWLEDGE ABOUT HEALTH AND ENVIRONMENTAL IMPACTS OF HAZARDOUS WASTES

Basis for action

16. Toxic substances have entered the environment endangering human health and threatening ecosystems, due to careless storage, handling and disposal of hazardous wastes. To address these problems, there is a need for increased knowledge on environmental contamination and pollution, the associated health risks from exposures of populations, especially women and children and ecosystems, to hazardous waste, the assessment of risks and the characteristics of wastes.

Objectives

17. The objectives are to:

(a) facilitate the assessment of impacts and risks of hazardous wastes on human health and the environment by establishing appropriate procedures, methodologies, criteria and/or effluent guidelines and standards;

(b) improve the knowledge regarding effects of hazardous wastes on health and the environment; and

(c) make information available to governments and to the general public on the effects of hazardous waste on health and the environment.

Activities

18. Development of technologies for prevention, minimization and handling of hazardous wastes

(a) International organizations could identify relevant and improved technologies for handling, storage, treatment and disposal of hazardous wastes.

(b) International organizations could develop improved health-based criteria upon which regulations and standards can be established, taking into account national decision-making processes, and assist in the preparation of practical technical guidelines for prevention, minimization and safe handling and disposal of hazardous wastes.

19. Development of management tools and practices

(a) Governments could establish and maintain inventories including computerized inventories of hazardous wastes and their treatment/disposal sites and assess the risk to the environment as well as identify measures which are needed to clean up the disposal sites.

(b) Governments and international organizations could collaborate in developing easy to implement methods and guidelines for characterization and classification of hazardous wastes.

20. Information exchange and dissemination

Governments, international, including regional organizations, could facilitate and expand the dissemination of technical and scientific information dealing with the various health aspects of hazardous wastes, and to promote its application.

21. Promotion of education and training

(a) Governments and international organizations could collaborate in developing and disseminating educational materials concerning waste and their effects on environment and health, for use in schools and by the general public;

(b) Governments could establish or strengthen programmes for environmentally sound management of hazardous wastes in accordance with health and environmental standards and extend surveillance systems to identify adverse effects on populations and the environment of exposure to hazardous wastes;

(c) International organizations could provide assistance to Member States for assessing the health and environmental risks, resulting from exposure to hazardous wastes and in identifying their priorities for controlling the various categories or classes of wastes;

(d) Governments could promote centres of excellence for training in waste management, building on appropriate national institutions, and encouraging international cooperation including through institutional links between developed and developing countries.

[The implementation by developing countries of specific programmes and actions envisaged under Agenda 21 will be subject to the provision of adequate new and additional financial resources and of technology on concessional, preferential and non-commercial terms.

Proposals for means of implementation will include the following heading:

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- Building capacity of developing countries for preventive and corrective action in the field of environmental protection and promotion of development]

D. PROMOTE AND STRENGTHEN INSTITUTIONAL CAPACITIES IN HAZARDOUS WASTE MANAGEMENT

Basis for action

22. Many countries lack the national capacity to handle and manage hazardous waste. This is primarily due to inadequate infrastructure, deficiencies in regulatory frameworks, insufficient training and education programmes and lack of coordination between the different ministries and institutions involved in various aspects of waste management. To ensure environmentally sound management of hazardous wastes one of the main priorities is to provide awareness, education and training programme to cover all levels of the society. In addition there is a need to undertake research programmes to understand the nature of hazardous materials, to identify their potential environmental effects and to develop technologies to safely handle these materials. Finally there is a need to strengthen the capacities of institutions which are responsible for the management of hazardous materials.

Objectives

23. Adoption of appropriate coordinating, legislative and regulatory measures at the national level supporting the environmentally sound management of hazardous waste including for the implementation of international conventions.

24. Public awareness and information programmes on hazardous waste issues and basic education and training programmes provided for industry and government workers in all countries.

25. Comprehensive research programmes on hazardous materials to be established in countries.

26. Strengthened service industries for handling hazardous materials and strengthened international networking.

27. Endogenous capacities to be established in all developing countries to train and educate staff at all levels in hazardous waste handling, monitoring and environmentally sound management.

Activities

28. Strengthening of research

(a) International organizations [and donors] could increase support for hazardous waste research management in developing countries.

(b) Governments, in collaboration with international organizations, could conduct research on the health effects of hazardous wastes in developing countries conditions including the long-term effects on children and women.

(c) Governments could conduct research aimed at the needs of small and medium-size industries.

(d) Industry, governments and international organizations could expand technological research on hazardous wastes handling, storage, transport, treatment and disposal and hazardous wastes assessment and management.

29. Strengthening of institutional capacities and infrastructures

(a) Multinational companies (MNC) and other large scale enterprises should introduce policies and commitment to adopt equivalent or not less stringent standards of operation with reference to waste generation and disposal, while governments are invited to make efforts to establish regulations, which require such standards.

(b) Governments, international organizations and industry could as appropriate:

(i) Support national institutions for dealing with hazardous wastes from the regulatory monitoring and enforcement perspectives, including enabling them to implement international conventions.

(ii) Develop industry-based institutions for dealing with hazardous wastes and service industries for handling hazardous wastes.

(iii) Adopt technical guidelines for the environmentally sound management of hazardous wastes and support implementation of regional and international conventions.

(iv) Develop and expand international networking, between professionals working in the hazardous wastes area and maintain an information flow among countries.

(v) Assess the feasibility of establishing and operating national, sub-regional and regional hazardous waste treatment centres. Such centres could also be used for education and training as well as to facilitate and promote the transfer of technologies for the environmentally sound management of hazardous wastes.

(vi) Develop a programme for the establishment of national capacities to train and educate staff at various levels in hazardous waste management.

(vii) Study the feasibility [in the context of the Basel Convention and of relevant regional conventions] of providing financial assistance on an interim basis, in case of emergency situation, in minimizing damage from accidents arising from transboundary movements of hazardous wastes or during the disposal of these wastes.

(viii) Conduct environmental audits of existing industries to improve in plant hazardous wastes management regimes.

30. Promotion of education, training and public awareness

Governments, international organizations and industry could:

(a) Increase public awareness and information on hazardous waste issues and promote the development and dissemination of public information on hazardous waste that is understandable to the general public.

(b) Increase participation in hazardous waste management projects of the general public, including grass root levels.

(c) Develop training and education programmes for men and women in industry and government aimed at specific real-life problems, for example, planning and implementing waste minimization programmes, conducting hazardous materials audits or establishing appropriate regulatory programmes.

(d) Promote the transfer to developing countries of technologies on hazardous waste minimizing and handling through training for labour, industrial management, and government regulatory staff.

[The implementation by developing countries of specific programmes and actions envisaged under Agenda 21 will be subject to the provision of adequate new and additional financial resources and of technology on concessional, preferential and non-commercial terms.

Proposals for means of implementation will include the following heading:

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- Building capacity of developing countries for preventive and corrective action in the field of environmental protection and promotion of development]

E. PROMOTE AND STRENGTHEN INTERNATIONAL COOPERATION IN MANAGEMENT OF TRANSBOUNDARY MOVEMENTS OF HAZARDOUS WASTES, INCLUDING CONTROL AND MONITORING, CONSISTENT WITH INTERNATIONAL AND REGIONAL LEGAL INSTRUMENTS

Basis for action

31. In order to promote and strengthen international cooperation in the management, including control and monitoring of transboundary movements of hazardous wastes there is a need for harmonization of procedures and criteria used in various international and legal instruments. In this connection there is also a need to develop or harmonize existing criteria for identification of hazardous wastes dangerous to the environment, and building monitoring capacities.

Objectives

32. The objectives are:

(a) To facilitate and strengthen international cooperation in the environmentally sound management, including monitoring of transboundary movements of hazardous wastes by having internationally adopted criteria for identification and classification of hazardous wastes for the harmonization of relevant international legal instruments.

(b) To [adopt a ban on]/[prohibit/not permit] the export of hazardous wastes to countries, that do not have the capacity to deal with those wastes in an environmentally sound way.

Activities

33. Strengthening and harmonization of criteria and regulations

Governments and international organizations could cooperate as appropriate to:

(a) Incorporate the notification procedure called for in the Basel Convention and other relevant regional conventions as well as their annexes into national legislation.

(b) Formulate [international and where appropriate] regional agreements regulating transboundary movements of hazardous wastes, such as the Bamako Convention.

(c) [Help promote the complementarity of such regional agreements with international conventions and protocols.]

(d) Strengthen national and regional capacities and capabilities to monitor and control transboundary movement of hazardous wastes.

(e) Set up monitoring and surveillance systems including at the national and regional levels, for the transboundary movements of hazardous wastes.

(f) Develop guidelines for the identification of hazardous wastes at the national level, taking into account internationally, including regionally regionally agreed criteria and prepare a list of hazard profiles for the hazardous wastes listed in the national legislation.

(g) Develop and use appropriate methods for testing characterizing and classifying the hazardous wastes and adopt or adapt safety standards and principles for managing hazardous wastes in an environmentally sound way.

34. Adoption of normative measures

Governments and international organizations could collaborate to:

(a) Elaborate or adapt policies for the environmentally sound management of hazardous wastes [in conformity with]/[keeping in mind provisions of] existing international instruments.

(b) To make recommendations to the appropriate fora or to set up or adapt norms, including the equitable implementation of the polluter pays principle, and regulatory measures to comply with the obligations and principles of the Basel Convention, the Bamako Convention or other future regional and international agreements including protocols for setting out appropriate rules and procedures in the field of liability and compensation for damage resulting from the transboundary movement and disposal of hazardous wastes and other wastes, [as well as mandatory insurance to cover this].

(c) [To promote voluntary as well as mandatory prohibition of export of hazardous wastes to developing countries, and to countries that cannot treat and dispose of the wastes to the same stringent requirements as in the country of origin].

(d) [To urge governments to introduce legislation to severely punish persons engaged in illegal waste trade and illegal traffic].

35. Implementation of existing agreements

Governments are urged to ratify the Basel and Bamako Conventions and to pursue the expeditious elaboration of protocols on liability and compensation and of mechanisms and guidelines to facilitate the implementation of the conventions.

36. Promotion of information and public awareness

[To promote and assist intergovernmental and non-governmental organizations in establishing and enhancing information networks on transboundary toxic and hazardous waste trade and illegal traffic.]

[The implementation by developing countries of specific programmes and actions envisaged under Agenda 21 will be subject to the provision of adequate new and additional financial resources and of technology on concessional, preferential and non-commercial terms.

Proposals for means of implementation will include the following heading:

- Financing and cost evaluation

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- Building capacity of developing countries for preventive and corrective action in the field of environmental protection and promotion of development] ]

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